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NOTES ON GEOGRAPHIC DISTRIBUTION

New distribution records of six species of Asilinae (Diptera: Asilidae) Latreille, 1802

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ABSTRACT: The geographic ranges of six species of Asilinae are extended: *Anarmostus iopterus* Loew, 1860; *Cnodalomyia catarinensis* Lamas and Mellinger, 2008; *Cnodalomyia obtusa* Hull, 1962; *Eraxasilus pruinosus* Carrera, 1959; *Glaphyropyga pollinifera* Carrera, 1945; *Taurhynchus fervidus* (Curran, 1934).

Asilinae Latreille, 1802 is the most diverse subfamily of Asilidae, including 177 extant genera, and is distributed in all biogeographic regions, except Antarctica (Geller-Grimm 2004; Londt 2005; Papavero 2009). Species of the subfamily Asilinae are the most abundant and diverse group of robber flies in the temperate regions of the world, especially the Palearctic (Lehr 1988; Fisher 2009).

Sixty six genera are recognized in the Neotropical region, of which 18 occur in Brazil (Papavero 2009).

According to the catalogue of Neotropical Asilidae (Papavero 2009), the distribution of several species of Asilinae is restricted to type-locality. Herein, new records for six species - *Anarmostus iopterus* Loew, 1860; *Cnodalomyia catarinensis* Lamas and Mellinger, 2008; *Cnodalomyia obtusa* Hull, 1962; *Eraxasilus pruinosus* Carrera, 1959; *Glaphyropyga pollinifera* Carrera, 1945; *Taurhynchus fervidus* (Curran, 1934) - of Asilinae are provided, based on examination of specimens deposited at the Instituto Nacional de Pesquisas da Amazônia – INPA and additional specimens from Instituto Oswaldo Cruz – IOC, Museu Nacional do Rio de Janeiro – MNRJ and Instituto Nacional de Biodiversidad – INBIO.

Anarmostus iopterus (Wiedemann, 1828)

(Figure 1)

Distribution: Belize, Honduras, Venezuela, Guyana, Peru (Loreto, Madre de Dios, San Alessandro), Brazil (Pará: Óbidos; Bahia: Porto Seguro), Bolivia (Santa Cruz). **New Record:** Costa Rica (Guanacaste, Heredia); Brazil (Amazonas) (Table 1).

Material examined: COSTA RICA. **Heredia** – El Ceibo Biological Station, Braulio Cerrilo, N. P. 400-600m, iv.1990, C. Chaves leg., 527700-256500, INBIO CRI000 19426, 1 male (INBIO). **Guanacaste** – Pitilla Biological Station, 700m, 9km S, Santa Cecilia, vi.1989, GNP Biodiversity Survey 330200, 380200, INBIO CRI000 007832, 1 female (INBIO). BRAZIL. **Amazonas** – Manaus, ZF3, BR 174 Highway, Km 41, Reserve 1501, 02°27'26" S, 59°45'00" W, 17-31.i.1996, Rocha and Silva leg., L. E. F., 1 male (INPA). Parque Nacional do Jaú, locality Seringalzinho, 01°50'27" S, 61°35'35" W, 10-24.xi.2003, M.L. Oliveira leg., 1 female (INPA). Novo Aripuanã 05°15'53" S, 6007'09" W, rainforest, ix.2004, Henriques, Silva and Pena leg., 1 female (INPA). Novo Aripuanã, Sokagakai Reserve, 20.iv.2000, J. Vidal leg., 1 female (INPA). Parque Nacional do Jaú Unini River, locality of Bacaba, 01°45'52" S, 62°05'11" W, 14-19.vi.1996, A. L. Henriques, J. Vidal and F. Oliveira leg., 1 male (INPA). Reserve Unini, Unini River, 01°37' S, 62°59' W, 13-28.vii.2004, M. L. Oliveira, L. Aquino and A. Silva-Filho leg., 1 female (INPA). Manaus, INPA, 23.iv.2005, B. M. Oliveira leg., 1 female (INPA). Manaus, Reserve Ducke, 03-07.vii.2001, A. Coletto leg., 1 male (INPA). Manaus, Reserve Ducke, 20.ix.2001, J. A. Rafael and J. F. Vidal leg., 1 female (INPA) Manaus, Antonio leg., 4.xii.1961, 1 male (INPA). BR-17 Highway, Km 19, Manaus, 14.xii.1955, Elias and Roppa leg. 1 female (INPA).

Comments: According to Fisher (2009), this species is widely distributed from Belize to southern Brazil, although there are few specific records for this species in Brazil. Herein, *A. iopterus* is recorded for the first time in Amazonas state.

FIGURE 1. *Anarmostus iopterus* (Wiedemann, 1828), Female Habitus, lateral view.

Table 1. List of species, followed by previously known distribution and author, and new records.

TAXON	PREVIOUSLY KNOWN DISTRIBUTION AND AUTHOR	NEW RECORDS
Anarmostus iopterus Loew, 1860	Belize (Osten-Saken 1887); Honduras (Williston 1891); Venezuela (Ayala pers. comm.in Fisher 2009); Guyana (Martin and Papavero 1970); Peru: Loreto (Papavero 2009); Madre de Dios (Fisher 1985); San Alessandro (Carrera and d'Andretta 1954); Brazil: Pará: (Walker 1849, Óbidos: Carrera 1960); Bahia (Porto Seguro: Vieira *et al.* 2006); Bolivia: Santa Cruz (Papavero 1971)	Amazonas
Cnodalomyia catarinensis Lamas and Mellinger, 2008	Brazil: São Paulo (Campos do Jordão: Lamas and Mellinger 2008); Paraná (Curitiba: Lamas and Mellinger 2008); Santa Catarina (Nova Teutônia: Lamas and Mellinger 2008)	São Paulo (Bocaína)
Cnodalomyia obtusa Hull, 1962	Brazil: Rio de Janeiro (Alto Itatiaia: Hull 1962)	São Paulo
Eraxasilus pruinosus Carrera, 1959	Brazil: Goiás (Anápolis, Corumbá de Goiás, Goiânia: Carrera 1959); São Paulo (Severinia: Carrera 1959; Onda Verde: Carrera and Vulcano 1961)	Pará; Mato Grosso
Glaphyropyga pollinifera Carrera, 1945	Peru: Pando (Madre de Dios: Fisher 1985); Brazil: Pará (Óbidos: Carrera 1960); Espírito Santo (Linhares: Carrera 1960); São Paulo (São Paulo: Carrera 1945); Rio de Janeiro: Magé, Nova Iguaçu, Rio de Janeiro, Teresópolis (Carrera 1945); Bolivia (Beni: Carrera 1959)	Acre
Taurhynchus fervidus (Curran, 1934)	Brazil: São Paulo (Curran 1934); São Paulo (Praia Grande: Carrera 1947)	Amazonas

Cnodalomyia catarinensis Lamas and Mellinger, 2008

(Figure 2)

Distribution: Brazil (São Paulo: Campos do Jordão; Paraná: Curitiba; Santa Catarina: Nova Teutônia). **New municipality record:** São Paulo – Bocaína (Table 1).

Material examined: BRAZIL. **São Paulo** – Bocaína, x.1968, Alvarenga and Seabra leg., 3 males, 3 females (IOC). Bocaína, Fruticultura, 25.xi.1970, M. Alvarenga leg. 1 female (MNRJ).

Figure 2. *Cnodalomyia catarinensis* Lamas and Mellinger, 2008, Male Habitus, lateral view.

Cnodalomyia obtusa Hull, 1962

(Figure 3)

Distribution: Brazil (Rio de Janeiro: Itatiaia). **New Record**: São Paulo (Table 1).

Material examined: BRAZIL. **São Paulo** – Bocaína, x.1968, Alvarenga and Seabra leg., 2 male (IOC). Bocaína, Fruticultura, 25.xi.1970, M. Alvarenga leg. 3 males, 2 females (MNRJ).

Comments: According to Lamas and Mellinger (2008), the two species of *Cnodalomyia*, *C. obtusa* and *C. catarinensis* are distributed in the highlands of the Atlantic forest. Both species occur at Bocaína-São Paulo. Bocaina is situated at 580m altitude in a remaining area of Atlantic forest.

Eraxasilus pruinosus Carrera, 1959

(Figure 4)

Distribution: Brazil (Goiás: Anápolis, Corumbá de Goiás, Goiânia; São Paulo: Onda Verde, Severinia). **New Record**: Pará, Mato Grosso (Table 1).

Material examined: BRAZIL. **Pará** – Alter do Chão, 15-18.ii.1992, J. A. Rafael leg., 1 male (INPA). Conceição do Araguaia, 19-31.i.1983, J. A. Rafael leg., 1 male (INPA). **Mato Grosso:** Pantanal, 14-17.vi.1991, J.A. Rafael and J. Vidal leg., 2 male, 2 female (INPA).

Figure 3. *Cnodalomyia obtusa* Hull, 1962, Male Habitus, lateral view.

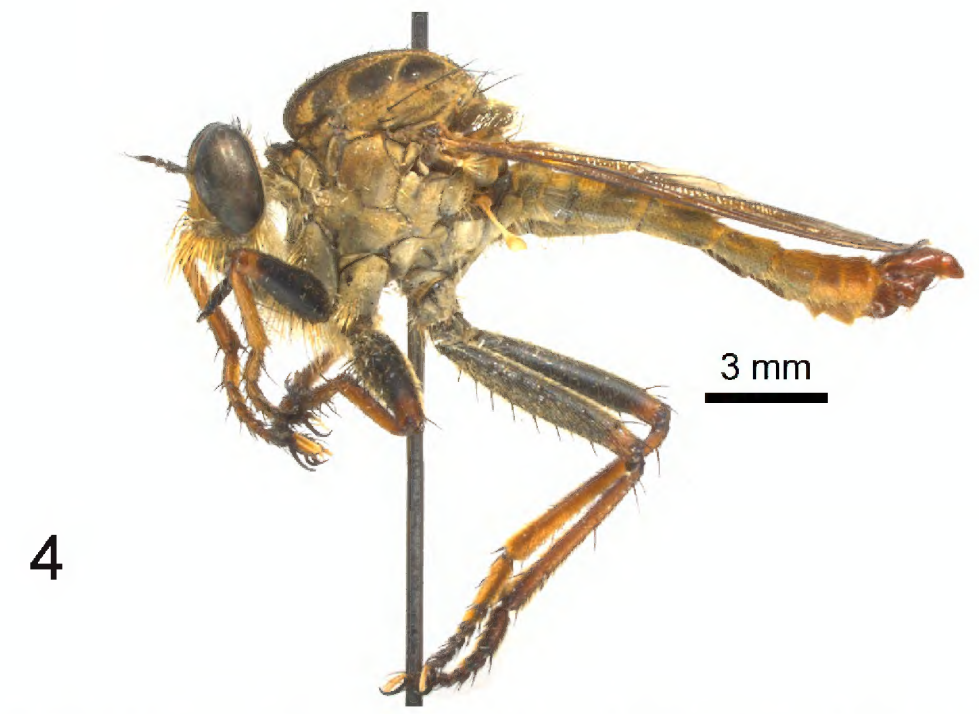

Figure 4. *Eraxasilus pruinosus* Carrera, 1959, Carrera, 1959, Male Habitus, lateral view.

Glaphyropyga pollinifera Carrera, 1945

(Figure 5)

Distribution: Peru (Pando: Madre de Dios), Brazil (Pará: Óbidos; Espirito Santo: Linhares; Rio de Janeiro:

Magé, Nova Iguaçu, Rio de Janeiro, Teresópolis; São Paulo: São Paulo), Bolivia (Beni). **New Record**: Acre. (Table 1).

Material examined: BRAZIL. **Acre** – Cruzeiro do Sul, Moa River, 07°37'02" S, 72°46'15" W, 9-28.xi.1996, J. A. Rafael, J. Vidal and R. L. Menezes leg., 1 male (INPA).

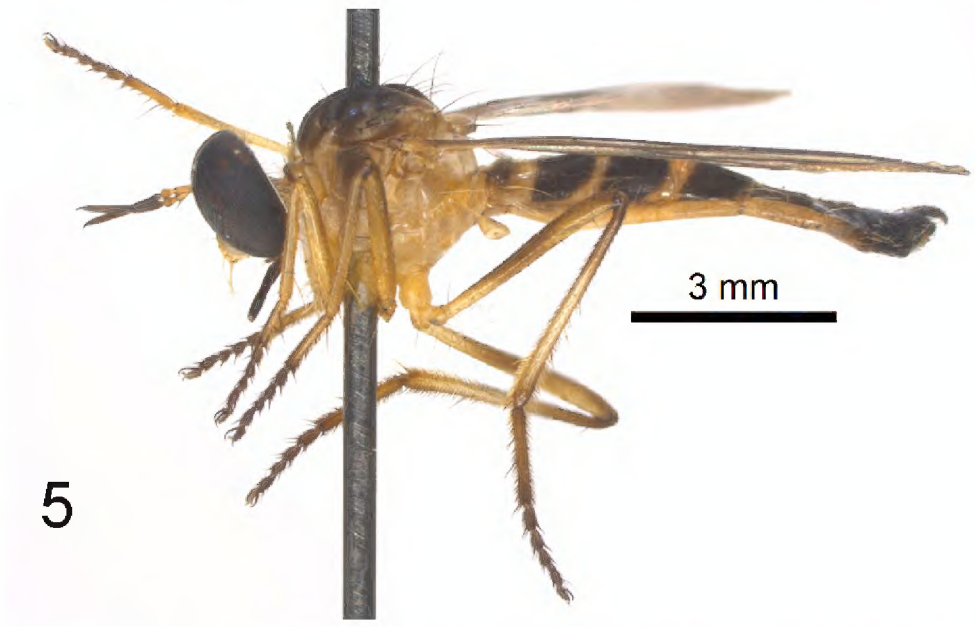

Figure 5. *Glaphyropyga pollinifera* Carrera, 1945, Male Habitus, lateral view.

***Taurhynchus fervidus* (Curran, 1934)**
(Figure 6)

Distribution: Brazil (São Paulo: Praia Grande). **New Record**: Amazonas. **New municipality record:** São Paulo – São Sebastião (Table 1).

Material examined: BRAZIL: **Amazonas** – Carauari, 5°05'27" S, 67°10'57" W, vii.2005, Xavier-Filho leg., 2 male (INPA). Presidente Figueiredo, AM-240, Km 24, Community S. Francisco, 15.vii.2002, F. F. Xavier-Filho leg., 1 female (INPA). Japurá River, ix.1982, R. Best leg. 1 male (INPA). Am.1 Highway Km 15, Manaus, 30.vii.1970, A. Faustino leg., 1 female (INPA). Manaus, Bolivia Stream, 19.xii.1957, Elias and Roppa leg., 1 male (INPA). Barcelos 0°28'38" N, 63°28'18" W, vii-viii.2007, A. S. Silva and T. Krolow leg., 1 female (INPA). Barcelos, Demeni River, locality of Pirico, viii.2008, 0°19'30" S, 62°47'21" W, A. Silva and R. Machado, leg., 1 female (INPA). **São Paulo** – Picinguaba, São Sebastião, 8.x.1985, Leonel, E. leg, 1 female (INPA).

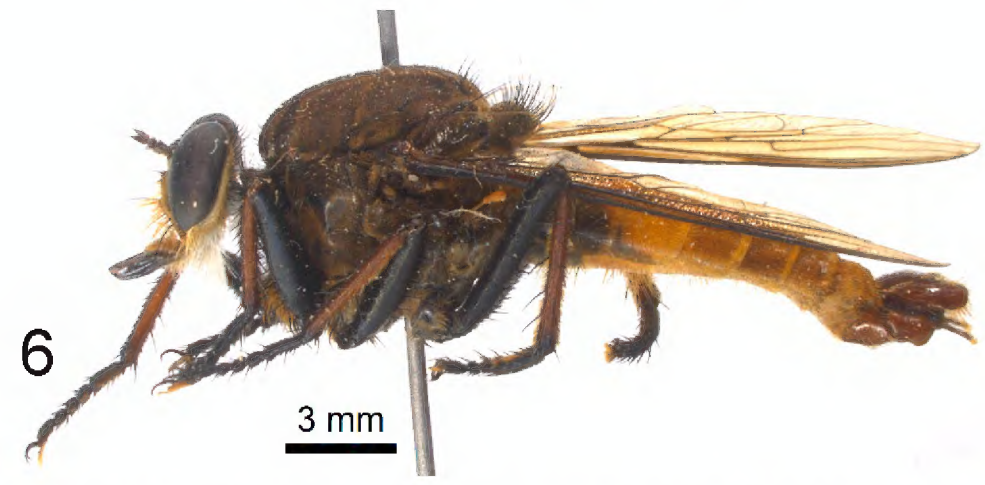

Figure 6. *Taurhynchus fervidus* (Curran, 1934), Male Habitus, lateral view.

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